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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/612,975	07/07/2003	Michael Redecker	6161.0066.AA	6522
7590	12/30/2004		EXAMINER	
McGuireWoods LLP Tysons Corner Suite 1800 1750 Tysons Boulevard McLean, VA 22102-4215			QUARTERMAN, KEVIN J	
			ART UNIT	PAPER NUMBER
			2879	
			DATE MAILED: 12/30/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.

9/1

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/612,975	REDECKER, MICHAEL	
	Examiner Kevin Quarterman	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 12 October 2004.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-24 is/are pending in the application.
  - 4a) Of the above claim(s) 20-24 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-19 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 07 July 2003 is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    - a) All    b) Some \* c) None of:
      1. Certified copies of the priority documents have been received.
      2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
      3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Group I, claims 1-19, in the reply filed on 12 October 2004 is acknowledged. The traversal is on the ground(s) that the search and examination of the entire application could be made without serious burden, since the subject matter of all claims is sufficiently related that a thorough search for the subject matter of any one group of claims would encompass a search for the subject matter of the remaining claims. This is not found persuasive because the Examiner has satisfied the requirements, as set forth in MPEP § 808.02, for establishing undue burden. In particular, the Examiner has shown separate classification of the inventions and also a different field of search for the invention.

2. The requirement is still deemed proper and is therefore made FINAL.

### ***Claim Objections***

3. Claim 8 is objected to because of the following informalities: the claim states "the emitter layer is formed of at least one of a low molecular organic material, a light-emitting polymer, and the light-emitting polymer is a material selected from the group comprising..." It appears that the term "and" should be placed between the phrases "low molecular organic material" and "a light-emitting polymer" to make the claim more comprehensible. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 10-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claims 10-12 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are the display, its emitter layer, and the excitation light source. The emitter layer receives light from the excitation light source, but there is no structural cooperative relationship between the emitter layer and the excitation light source.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-9 and 13-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Arnold (US 6747618).

9. Regarding independent claim 1, Figure 6 of Arnold shows a display comprising a substrate (154) with a plurality of sub-pixels arranged on at least a first side of the

substrate, wherein each sub-pixel comprises a first electrode (156) having a first polarity; a second electrode (158) having a second polarity; and an emitter layer (164), wherein the emitter layer is interposed between the first electrode and the second electrode. The Examiner notes that the functional recitations of the emitter layer have not been given patentable weight, since apparatus claims must be distinguished from the prior art in terms of structure rather than function (MPEP § 2114). Since Figure 7 of Miller shows each of the claimed structural limitations, the structure of Miller inherently possesses the capability of performing the claimed functions.

10. Regarding claim 2, Arnold discloses the substrate being formed of a transparent material (col. 7, ln. 1-5), the first electrode being formed of a transparent material (col. 7, ln. 15-20), and the second electrode being formed of a light-reflecting material (col. 11, ln. 15-18).

11. Regarding claim 3, Figure 6 of Arnold shows the first electrode adjacent to the first side of the substrate and formed of a light-reflecting material, and the second electrode formed of a transparent material (col. 7, ln. 15-35).

12. Regarding claim 4, Arnold discloses the substrate formed of a light-reflecting material and the first electrode and second electrode formed of a transparent material (col. 7, ln. 1-35).

13. Regarding claim 5, Arnold discloses the substrate formed of a transparent material and providing a dielectric mirror to the structure (col. 11, ln. 13-21), the first electrode and second electrode being formed of a transparent material (col. 7, ln. 15-35).

14. Regarding claim 6, Arnold discloses the substrate formed of a transparent material and providing a dielectric mirror to the structure (col. 11, ln. 13-21), the first electrode and second electrode being formed of a transparent material (col. 7, ln. 15-35).

15. Regarding claim 7, expressions relating to contents thereof during an intended operation are of no significance in determining patentability of an apparatus claim (MPEP § 2115).

16. Regarding claim 8, Arnold discloses the emitter layer formed of at least one of a low molecular organic material and a light-emitting polymer, the light-emitting polymer being a material selected from the group comprising polyphenylene vinylene or the group comprising polyfluorene (col. 8, ln. 51-67).

17. Regarding claim 9, Figure 6 of Arnold shows a hole transport layer (162) interposed between the first electrode and the emitter layer, the first electrode being an anode and the hole transport layer being formed of at least one of polyethylene dioxy thiophene, polystyrene sulfone acid, and polyaniline (col. 8, ln. 46-50).

18. Regarding claim 13, Arnold discloses an optical unit which can adjust the light emitted from the emitter layer (col. 11, ln. 13-23).

19. Regarding claim 14, Arnold discloses a screen on which an image is formed with the light emitted from the emitter layer (col. 3, ln. 42).

20. Regarding claim 15, the functional recitations of the dielectric mirror has not been given patentable weight since apparatus claims must be distinguished from the prior art in terms of structure rather than function (MPEP § 2114).

21. Regarding claim 16, the functional recitations of the dielectric mirror has not been given patentable weight since apparatus claims must be distinguished from the prior art in terms of structure rather than function (MPEP § 2114).
22. Regarding claim 17, Arnold discloses the dielectric mirror including a plurality of layers having different refractive indices (col. 11, ln. 13-28).
23. Regarding claim 18, Arnold discloses the dielectric mirror including a plurality of layers having different refractive indices (col. 11, ln. 13-28).
24. Regarding claim 19, Arnold discloses a low-refractive index layer formed of at least one of silicon dioxide, silicon nitride, and magnesium fluoride, and a high-refractive index layer formed of at least one of titanium dioxide, tin oxide, zirconium oxide, and tantalic oxide (col. 11, ln. 4-28).

***Conclusion***

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shirasaki (US 5834894) discloses a carrier injection type organic electro-luminescent device.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quarterman whose telephone number is (571) 272-2461. The examiner can normally be reached on M-TH (7-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin Quarterman  
Examiner  
Art Unit 2879

kq   
22 December 2004

*Joseph Williams*  
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